

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 05558.0031.00PC01	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/US2006/031274	International filing date (day/month/year) 09/08/2006	(Earliest) Priority Date (day/month/year) 09/08/2005
Applicant ZYMOGENETICS, INC.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 6 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of:

- ☒ the international application in the language in which it was filed
☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b. ☒ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☒ **Certain claims were found unsearchable** (See Box No. II)

3. ☐ **Unity of invention is lacking** (see Box No. III)

4. With regard to the **title**,

- ☒ the text is approved as submitted by the applicant
☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- ☒ the text is approved as submitted by the applicant
☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. 1
☒ as suggested by the applicant
☐ as selected by this Authority, because the applicant failed to suggest a figure
☐ as selected by this Authority, because this figure better characterizes the invention
b. ☐ none of the figures is to be published with the abstract

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2006/031274

Box No. I Nucleotide and/or amino acid sequence(s) (Continuation of item 1.b of the first sheet)

1. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, the international search was carried out on the basis of:
 - a. type of material
 - ☒ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material
 - ☒ on paper
 - ☒ in electronic form
 - c. time of filing/furnishing
 - ☒ contained in the international application as filed
 - ☒ filed together with the international application in electronic form
 - ☐ furnished subsequently to this Authority for the purpose of search
2. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
3. Additional comments:

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2006/031274

A. CLASSIFICATION OF SUBJECT MATTER

INV. A61K38/17 C07K14/705 A61P35/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, CHEM ABS Data, EMBASE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,P	EP 1 666 052 A (GENENTECH INC [US]) 7 June 2006 (2006-06-07) claims 1,3,4,19,21,22,44,45,49-51,53-55,59-61 page 7, paragraph 31 - paragraph 32 page 26, paragraph 45 page 33, paragraph 96 page 28, paragraph 59 page 29, paragraph 63 - paragraph 65 page 35, paragraph 106 page 42, paragraph 172 - paragraph 174 ----- -/--	1,4,6, 9-12

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- * & * document member of the same patent family

Date of the actual completion of the international search

30 April 2007

Date of mailing of the international search report

01/06/2007

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INTERNATIONAL SEARCH REPORT

International application No

PCT/US2006/031274

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	WO 02/094852 A2 (ZYMOGENETICS INC [US]) 28 November 2002 (2002-11-28) claims 1-44 page 4, line 17 - line 18 page 43, line 34 - page 44, line 2 page 19; table 1 page 47, line 33 - line 36 page 46, line 31 - line 36	1,3-6, 11,12 2
Y	ANONYMOUS: "Waldenström macroglobulinemia" WIKIPEDIA, THE FREE ENCYCLOPEDIA, [Online] XP002431669 Retrieved from the Internet: URL: http://en.wikipedia.org/wiki/Waldenström's_macroglobulinemia the whole document	2
X	WO 00/40714 A (OLIGOS ETC INC [US]; DALE RODERIC M K [US]; ARROW AMY [US]; THOMPSON T) 13 July 2000 (2000-07-13) claims 1,2,4,6,20,29,30,32,34,47 page 14, column 5 - column 26 page 54, line 32 - line 34 page 84, line 35 - page 85, line 13 examples 6,7,13,14	1,4,6, 11,12
A	WO 01/81417 A (BIOGEN INC [US]; APOTEC R & D S A [CH]; AMBROSE CHRISTINE [US]; THOMP) 1 November 2001 (2001-11-01) claims 1-20	1-12
A	GROSS J A ET AL: "TACI-IG Neutralizes Molecules Critical for B Cell Development and Autoimmune Disease: Impaired B Cell Maturation in Mice Lacking BLYS" IMMUNITY, CELL PRESS, US, vol. 15, August 2001 (2001-08), pages 289-302, XP003008630 ISSN: 1074-7613 cited in the application abstract	1-12
A	GROOM J ET AL: "Association of BAFF/Blys overexpression and altered B cell differentiation with Sjögren's syndrome" JOURNAL OF CLINICAL INVESTIGATION, NEW YORK, NY, US, vol. 109, no. 1, 2002, pages 59-68, XP002351435 ISSN: 0021-9738 cited in the application abstract	1-12

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2006/031274

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claims 1-12 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2006/031274

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 1666052	A	07-06-2006	NONE	
WO 02094852	A2	28-11-2002	BR 0209933 A	30-03-2004
			CA 2448123 A1	28-11-2002
			CN 1612750 A	04-05-2005
			EP 1436003 A2	14-07-2004
			HR 20030948 A2	30-06-2004
			JP 2004535182 T	25-11-2004
			MX PA03010687 A	01-07-2004
			NZ 529638 A	19-12-2003
			PL 366760 A1	07-02-2005
			YU 92503 A	25-05-2006
			ZA 200308984 A	20-07-2004
WO 0040714	A	13-07-2000	AU 781577 B2	02-06-2005
			AU 2480800 A	24-07-2000
			CA 2357950 A1	13-07-2000
			EP 1141278 A2	10-10-2001
			JP 2002534086 T	15-10-2002
			US 2003045490 A1	06-03-2003
WO 0181417	A	01-11-2001	AT 336509 T	15-09-2006
			AU 5392001 A	07-11-2001
			CA 2404945 A1	01-11-2001
			DK 1297013 T3	27-12-2006
			EP 1297013 A2	02-04-2003
			JP 2004513876 T	13-05-2004
			NZ 521629 A	28-05-2004